Work Order ID Wednesday, April 10, 2		PM		*994	97*			AS	PP		Page 1
Item ID: D3999 Revision ID: Item Name: Angle	9-9			Accept	*N900	040	100)*	Setup Sta	1.71	S1*
Start Date: 4/10/2 Required Date: 4/17/2 Reference:		Qty: 8.00 Qty: 8.00	*8* *8*		Cust Item II Customer:	D:				· "N	S2*
Approvals: Proce	ess Plan:	MF.	Date: 13-44	1 O _{Tooling} :	Da	te:]	Run Sta	^{rt} *N	R1*
QC:			Date:		Da	te:			Sto	^p *N	R2*
Sequence ID/ Work Center ID	Operat Descrip		V to killing the term	Set Up/ Francis	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nb	r			-					 	
D3999	A										
100				0.00							
100 Waterjet FLOW CNC Waterjet		Memo 1-Cut as per Dwg Rev: Prog Rev: 2-Deburr if n	A	0.00				_8_	_ 0		JmB410
		2 200 an ii ii	. coossai y								
110	QC2- Ins	pect parts off ma	achine FAI/FAIB	0.00				•			
*11 0 *		Memo		0.00				8	٥		Jm 134-10

Memo

Quality Control

											DQA:	Dat	e: _	
NCR:	Yes	/ No				WORK ORDER NON-C	CON	FORM	MANCE / UPDATE	E				
										-	QA Closed:	Dat	e:	
Work Orde	er.					DISPOSITION			A	GAINST DI	PARTMENT	/PROCESS		
Part I	۔ ۔ No.					Rework Scrap Use-as-is Work Order Update		Therm	Machining Sm noforming Fi	osstube mall Fab inishing mposite		Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update	1	nitial	Action		Sign &			
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	Ш	Centre No	ot Concer	ntric to	o/s	BOM/Route	\square	Hardwa	re		Over/Under	tolerance	╝	emperature/Cure
	Ш	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	it	_	Veld
		Crushed/0	Crimped		L	Burrs		Instruct	ions Incomplete/Unclea	ır 📙	Part Lost/Mi	ssing	\v	Vrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread Offset Positioned Wrong

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde Wednesday, Apri				*90	9497*							Page 2
Revision ID:	D3999-9 Angle			Accept	*NC	300040	100)*	Setup S	Start Stop		S1* S2*
Start Date: Required Date: Reference:	4/10/2013 4/17/2013	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*			t Item ID: tomer:					IV.	
Approvals:	Process Pla	ın:	Date:	Tooling:		Date:	_		Run S	Start	*NI	२ 1*
	QC:		Date:	SPC (Y/N):		Date:			S	Stop		R2*
Sequence ID/ Work Center ID		Operation Description	Carlos To Silving	Set Up/		oi ID - Tool #	Plan Code	Accept Qty	Rejec Qty			Insp. Stamp
*120 *120* OC		QC8- Inspect parts - seco	ond check	0.00	77.			8				
Quality Control		Memo		0.00 15	4.11							
130		Bend as per dwg		0.00								\mathscr{A}_{i}
130 Brake NC Brake NC		Memo		0.00	·			_8_			*	(3/04/
				⊘ ^	<u>v</u>							-
140	•	QC5- Inspect part comple	eteness to step on W/O	0.00								
*14 ∩ *		Memo		0.00	4 13			8				

Quality Control

											DQA:	Date	:
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						·					QA Closed:	Date	•
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	 No					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		nitial	Acti	on	Sign &		
Cause		Date	Step	Qty	1	or Non-conformance	Chi	ief Eng	Descri	ption	Date	Verification	QC Inspector
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		racks				Broken/Damaged	Ш	Inspecti	on Incomplete	<u> </u>	Part Incorred	t _	Weld
		crushed/0	Crimped		L	Burrs	Ш	Instruct	ions Incomplete/U	nclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	l lo	uffs			[Contamination		Mainte	nance		Part Moved	•	

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Work Orde Wednesday, April				*994	.97*				Page 3
Item ID: Revision ID:	D3999-9			Accept	*N900040	100*	Setu	p Start	* *NS1*
	Angle 4/10/2013 4/17/2013	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*	•	Cust Item ID: Customer:			Stop	*NS2*
Approvals:			Date:	Tooling: SPC (Y/N):	Date:		Run	Start Stop	"NR1"
Sequence ID/ Work Center ID 170 *170* Packaging)	Operation Description Identify as per dwg & Stock		Run Hours	Tool ID Tool #	Plan A Code Q		Reject Oty	Reject Insp. Number Stamp
Packaging 180 *180* QC		QC21- Final Inspection - W	ork Order Release	0.00				13/0	1/1648

N12-04-15

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Quality Control

										DQA:	Date	e:
NCR: Y	es / No			•	WORK ORDER NON-C	O	NFORM	MANCE / UP	DATE	QA Closed:	Date	e:
					DISPOSITION		1		AGAINST DE			
Work Orde	er:					,		cu:		` 1	_	
Part N	lo				Rework Scrap		ſ	Skid-tube Machining	Crosstube Small Fab	-1	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	lo				Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root				Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
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	Cracks				Broken/Damaged		Inspecti	on Incomplete	ļ	Part Incorre	ct _	Weld
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	Cuffs			<u>L</u>	Contamination		Mainte	nance		Part Moved		
	Heat Tre	at		<u> </u>	Countersink		Mislabe	led	<u></u>	Positioned V	-	
	Inspection	n Strip in	Tube	L	Cut Too Short		Misread	I		Power Loss/	Surge	Other
	Ripples ii	n Bend			Drill Holes	L	Offset					
	Torque V	Vaves in E	Extrusio	n 🗍	Drawing	1.	Out of C	Calibration				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Picklist Print

Wednesday, April 10, 2013 1:05:03 PM

Work Order ID:

99497

Parent Item:

D3999-9

Parent Item Name:

Angle

4.24

Start Date: 4/10/2013

Required Date: 4/17/2013

Page 1

Start Qty: 8.00

Required Qty: 8.00

Comments:

IPP rev A 10.01.20 new issue Prelim EC verified by:DD IPP rev B 10.05.10 ecn 10-562 EC

verified by:DD

	vermed by .DD												
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063 6061-T6 .063 Sheet		Purchased	No			100	sf	234.5625	0.0248	0.1984 O.2	* * * <u></u>	J	m34-10
				Location		Loc Qty	<u>Lo</u>	c Code					

Location Loc Qty MAT021 234.5625 123135 120.5625 124003 114

124003

										DQA:	Date:	
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	**************************************				DISPOSITION				AGAINST DE			
Work Orde	er:				DISPOSITION	_	•	_	AGAINS1 DE	raktivicivi,	/ F NOCE33	
Part N	No	-			Rework Scrap Use-as-is	 - 	. [Skid-tube Machining Moforming	Crosstube Small Fab Finishing	1	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	No			<u>.</u>	Work Order Update]		Large Fab	Composite	nec/3to	Supplier	
Root				Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Cr	nief Eng	Desc	ription	Date	Verification	QC Inspector
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	Cracks				Broken/Damaged	\perp	4 '	on Incomplete		Part Incorre	 	Weld
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	Cuffs			<u> </u>	Contamination	\perp	Mainte			Part Moved		
	Heat T	reat			Countersink		Mislabe	led		Positioned V		1
	Inspec	tion Strip ir	1 Tube		Cut Too Short	1	Misread			Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

99497. D Ø0.768 С GRAIN DIRECTION - Q£ 1.38 BEND LINE 0.68 0.063 1.29 REF D3999-9F FLAT PATTERN NOTES: 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.063 THICK PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 REF DART SPEC M6061T6S0.063 DESIGN DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWN REF DART SPEC M6061T6S0.063

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: N/A

7) WEIGHT: 0.02 lbs CHECKED DRAWING NO. REV. A D3999 MFG. APPR. SHEET 10 OF 12 APPROVED TITLE SCALE

7

BAFFLE

2

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NTS

DE APPR.

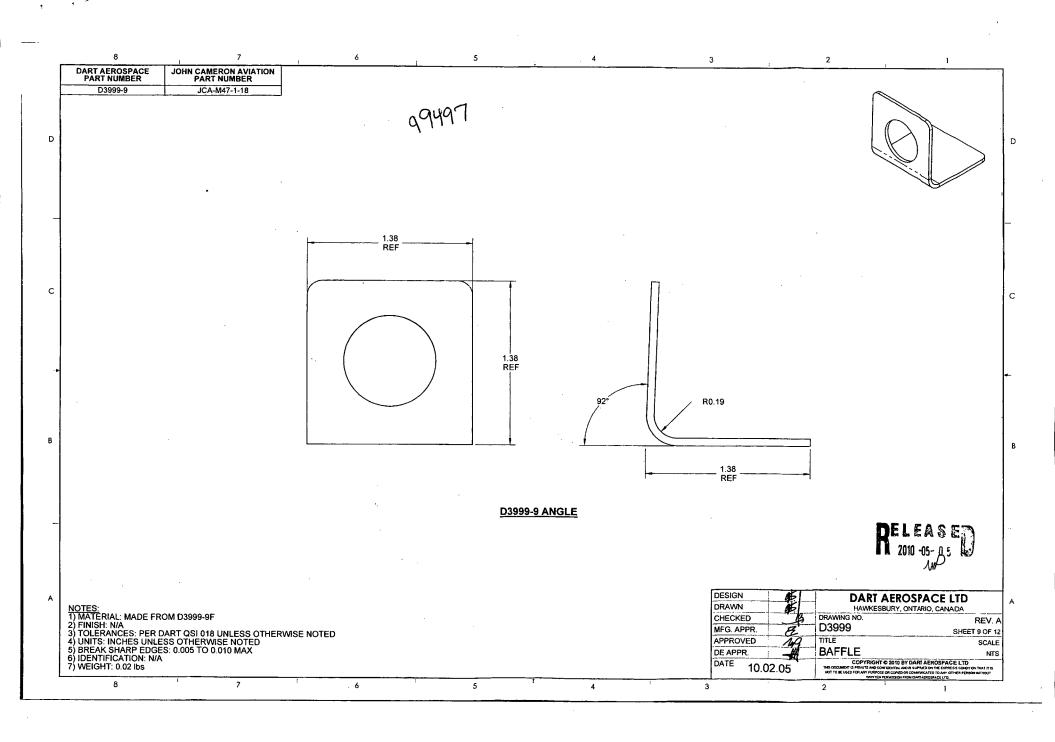
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DATE

3

											DQA:	Date	:
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Part N	-					Rework Scrap Use-as-is Work Order Update		Thern	Machining S noforming I	rosstube mall Fab Finishing mposite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
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	\dashv	Heat Trea	+		-	Countersink	-	Mislabe		-	Positioned W	/rong	
	\dashv	Inspection		Tube	-	Cut Too Short	-	Misread			Power Loss/S		Other
	_	Ripples in	-	. 450	-	Drill Holes		Offset	-	L	1 2 11 2 1 2 2 3 3 7 4		<u> </u>
	_	Torque W		xtrusion	,一	Drawing	1.	-	Calibration				10 10 10 10 10 10 10 10 10 10 10 10 10 1
	-	Turning Se				Finish		Out of	Sequence				
Ì		Wave/Twi		e		Folio		Outside	Dimensions				

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				•							DQA:	Date	:
NCR:	Yes /	No				WORK ORDER NON-C	100	NFORM	MANCE / UP	DATE	04.61		
					•	1					QA Closed:	Date	:
Work Orde	eř:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	No	-				Rework Scrap Use-as-is		Therm	Skid-tube Machining noforming	Crosstube Small Fab Finishing	i	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	1 0					Work Order Update	1	1	Large Fab	Composite	ļ	Supplier	
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Cause	[Date	Step	Qty	·	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
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Operator	Ш												
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Setup						•		'					
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	⊢		Strip in	Tube	_	Cut Too Short	-	Misread	I		Power Loss/	Surge	Other
	⊢ ⊣ `	ples in				Drill Holes	\vdash	Offset					
	To	rque W	aves in E	xtrusio	n	Drawing	1	Out of C	Calibration				

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish

DART AEROSPACE LTD	Work Order:	99497
Description: Angle	Part Number:	D3999-9
Inspection Dwg: D3999 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Con	nments
Ø0.768	+0.010/-0.001	8768"	-		U	JAma	\
2.59	+/-0.030	2.587	J		ν		
1.38	+/-0.030	1,381	_		V		
0.68	+/-0.030	0.673"	_		V		
0.063	+/-0.010	0.673"			V		
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easured by:	Im.	Audited by:	24		Preliminary Ap	proval:	N/A
			13 /	. — — —			

	Measured by: Jm	Audited by:	200		Preliminary Approval:	N/A			
	Date: 13-4-10	Date:	134.11		Date:	N/A			

Rev	Date	Change	Revise	d ky	Approved
Α	10.08.03	New Issue	KJ	PR	
				7/1	

									DQA:	Date:			
NCR: Yes	s / No			WORK O	RDER NON-C	ONFORM	AANCE / UP	DATE		_			
									QA Closed:	Date:	-ta		
Work Order:	•			DISI	DISPOSITION Rework		AGAINST DEPARTMENT/PROCESS						
							Skid-tube Crosstube			Water Jet	Engineering		
Part No.	1				Scrap		Machining Small Fab		Prod. Eng. Coor.		Quality		
, are no	•				Use-as-is Thermoforming Finishing				Rec/Store/Packaging		Other		
NCR No).			Work O	rder Update		Large Fab	Composite		Supplier			
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Root				Description of work	order update	Initial	Ac	tion	Sign &				
Cause	Date	Step	Qty	or Non-confor	mance	Chief Eng	Desc	ription	Date	Verification	QC Inspector		
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Equip/Tooling		ļ	ļ :		:				,				
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Pressure/Forced Bend Grain Ovalized Bending BOM/Route Temperature/Cure Over/Under tolerance Centre Not Concentric to O/S Hardware Broken/Damaged Part Incorrect Weld Inspection Incomplete Cracks Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Crushed/Crimped Burrs Cuffs Contamination Maintenance Part Moved Positioned Wrong Countersink Mislabeled Heat Treat Other Misread Power Loss/Surge Inspection Strip in Tube Cut Too Short Drill Holes Offset Ripples in Bend Out of Calibration Drawing Torque Waves in Extrusion Finish Out of Sequence Turning Sequence Wave/Twist in Tube Folio Outside Dimensions